Name:

p1106: Solve by factoring (v9)

1. Solve the equation

$$x^2 + 3x - 18 = 0$$

$$(x + 6)(x - 3) = 0$$
$$x = 3$$
$$x = -6$$

2. Solve the equation

$$x^2 + 5x + 6 = 0$$

$$(x + 2)(x + 3) = 0$$
$$x = -3$$
$$x = -2$$

3. Solve the equation

$$7x^2 + 2x = 6x^2 - 3x + 6$$

$$x^2 + 5x - 6 = 0$$
$$(x - 1)(x + 6) = 0$$
$$x = -6$$
$$x = 1$$

4. Solve the equation

$$8x^2 - 6x + 51 = 7x^2 + 9x - 3$$

$$x^2 - 15x + 54 = 0$$
$$(x - 9)(x - 6) = 0$$
$$x = 6$$
$$x = 9$$

5. Solve the equation

$$4x^2 - 2x + 7 = 3x^2 + 7x - 7$$

$$x^2 - 9x + 14 = 0$$
$$(x - 7)(x - 2) = 0$$
$$x = 2$$
$$x = 7$$

6. Solve the equation

$$7x^2 - 54x - 81 = 0$$

$$(7x + 9)(x - 9) = 0$$
$$x = 9$$
$$x = \frac{-9}{7}$$

7. Solve the equation

$$7x^2 - 53x - 24 = 0$$

$$(7x + 3)(x - 8) = 0$$
$$x = 8$$
$$x = \frac{-3}{7}$$

8. Solve the equation

$$6x^2 + 4x - 2 \;=\; 4x^2 - 5x + 3$$

$$2x^2 + 9x - 5 = 0$$
$$(2x - 1)(x + 5) = 0$$
$$x = -5$$
$$x = \frac{1}{2}$$

9. Solve the equation

$$6x^2 - 47x + 44 \;=\; x^2 - 9x - 4$$

$$5x^2 - 38x + 48 = 0$$
$$(5x - 8)(x - 6) = 0$$
$$x = 6$$
$$x = \frac{8}{5}$$

10. Solve the equation

$$14x^2 + 20x + 12 \;=\; 7x^2 + 4x + 3$$

$$7x^2 + 16x + 9 = 0$$
$$(7x + 9)(x + 1) = 0$$
$$x = -1$$
$$x = \frac{-9}{7}$$